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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,802	12/02/1999	DINESH KASHINATH ANVEKAR	YO999-540	1773

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Whittham, Curtis & Christofferson
11491 Sunset Hills Rd., suite 340
P.O. Box 9204
Reston, VA 20190

EXAMINER

BAYARD, EMMANUEL

ART UNIT PAPER NUMBER

2631

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,802

Applicant(s)

ANVEKAR ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-11 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 6-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-4 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 recites the limitation "the master unit" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 4 recites the limitation "the different clock bits" in line 3. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 8 recites the limitation "the regular scheduling order" in line 24. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1-4, 12 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention. By Otsuka U.S. Patent No 5,425,031.

As per claims 1, and 12-13, Otsuka discloses a frequency hopping time division duplex indoor wireless communication system comprising: a base station (see figs. 1-2, 5 elements 102, 102A and col.1, lines 64-67 and col.2, line 46) having a processor (see figs. 2, 5 element 11 and col.1, line 61) and a first switch circuit is functionally equivalent to the claimed (first frequency selection unit) (see fig. 5 element 8 and col.5, lines 15-30 and col.6, lines 22-31) for finding a current frequency on which to transmit and receive during the current time slot and at least a second switch circuit is functionally equivalent to the claimed (second frequency selection unit) (see fig.5 element 7 and col.5, lines 47-67) interfaced with said processor (11) to select frequencies to be used in future time slots; and a plurality of mobile stations (see fig.1 elements 100-1, 100-2) communicating with said base station.

As per claim 2, the time division duplex of Otsuka inherently includes logic units to perform frequency hop selection according to predetermined standards.

As per claim 3, the time division duplex of Otsuka inherently includes providing binary information about a Pico-cell related address bits and clock bits corresponding to the time slot.

As per claim 4, the time division duplex of Otsuka inherently includes different clock bits corresponding to different time slots.

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Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 5 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki U.S. Patent No 6,256,356 B1.

As per claims 5 and 13-14, Suzuki discloses a frequency hopping indoor wireless communication system comprising: a base station is functionally equivalent to the claimed (master unit) and a plurality of terminal units is functionally equivalent to the claimed (slave units) (see col.3, lines 58-67); said master unit having a plurality of link state counters C(i,j) (see figs. 2-4 and col.3, lines 42-43 and col.4, lines 14-14), wherein the states of wireless link between the

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master unit and a slave unit are recorded (see col.10, lines 30-40) in link state counters provided one for each frequency of communication fl between the master and the slave "T".

Allowable Subject Matter

10. Claim 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

11. Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 9-11 are allowed over the prior art of record.

13. The following is a statement of reasons for the indication of allowable subject matter: the present invention teaches a frequency hopping time division duplex communication system. The prior arts of Suzuki U.S. Patent No 6,256,356 B1 and Otsuka U.S. Patent No 5,425,031 teach a similar frequency hopping communication system. However the above prior arts fail to anticipate or render obvious the recited features: the counter is reset to zero when a current transmission/reception with reference to slave unit on frequency is successful or when the count value exceed exceeds a reset threshold T as recited in claim 6. If the link state history counter values of all active slave units are above a threshold T, the master unit chooses a slave unit whose link state history counter has a lowest value, and decides on a packet size of one as recited in claim 8. If all frequencies corresponding different allowed packet sizes are such that the

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corresponding link state history counter values are above the threshold T, the master unit proceeds to choose another slave unit for transmission as recited in claim 9. The master unit constructs a link state history table of counters after receiving values of goodness counters from all the slave units and uses this information during a next scheduling period as recited in claim 10.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakoda et al U.S. Patent No 6,351,461 B1 teaches a communication method.

Wakayama et al U.S. Patent No 6,212,221 B1 teaches a communication apparatus.

Noll Barreto et al U.S. Patent No 6,223,048 B1 teaches a method for generating frequency hopping sequence..

Kim U.S. Patent No 5,936,211 teaches an elevator control system.

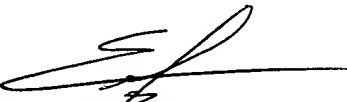
Shida et al U.S. Patent No 6,014,406 teaches a frequency-hopped wireless communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.


Emmanuel Bayard

Patent Examiner

November 12, 2002